REMARKS

In view of the amendments above and remarks to follow, Claims 10-18 are pending. Claim 13 has been amended and support may be found in the Specification as filed. No new matter has been added.

OBJECTION

The disclosure has been objected to for informalities. The objection should be withdrawn in view of the modifications above and remarks below.

In light of the comments in the outstanding Office Action, the disclosure has been amended on page 6. Reconsideration is requested.

REJECTION UNDER 35 USC 102 or 35 USC 103

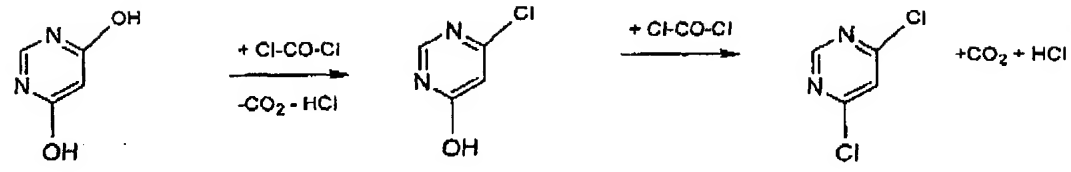
The Office Action rejected Claims 10, 11 and 13-17 under USC 102(b) as anticipated by Bowen or in the alternative under 35 USC 103(a) as obvious over Bowen. The rejection should be withdrawn in view of the modifications above and remarks below.

The Office Action alleges that:

> A process is inherently taught if inferences, which one would reasonably make, are taken into account, *In re Napier*, 34 USPQ2d 1782. The reference teaches the reaction of 4,6-dihydroxypyrimidine with phosgene to yield 4,6-dichloropyrimidine. What is inherent in this reference is the use of 4-chloro-6-hydroxypyrimidine as starting material. (Office Action, page 3, lines 1-6)

The Office Action also alleges:

> The reaction of phosgene or thionyl chloride with a hydroxyl compound requires one molecule of reagent for each hydroxyl group. With phosgene, one molecule of CO_2 and one molecule of HC1 must be produced as by-products in the synthesis of a chlorine derivative. Only one hydroxyl group of 4,6-dihydroxypyrimidine may be transformed into a chlorine atom by the phosgene reagent. The reaction taught by Bowen (WO 95/29166 Al), thus may be pictured below. Two molecules of phosgene are required in the process of Bowen (WO 95/29166 Al). Applicants' 4-chloro-6-hydroxypyrimidine starting material is a necessary intermediate in the process taught in the prior art and thus is inherently



4,6-dihydroxypyrimidine 4-chloro-6-hydroxypyrimidine 4,6-dichloropyrimidine

present in the reaction mixture of Bowen (WO 95/29166 Al). Applicants' 4-chloro-6-hydroxypyrimidine starting material is generated *in situ* in the reference. Thus, claim 13, which optionally permits "a reaction mixture containing" the starting material, is inherently anticipated. Since both the starting material and product of Bowen (WO 95/29166 Al) are symmetrical, it is a random choice as to which hydroxyl group first reacts. (Office Action, page 3, para. 2 - page 4, para. 1)

The Office Action continues to allege that:

The process is found in paragraph 3, page 1, paragraphs 2-8, page 2, and Examples 1-6, pages 2-4 of the reference. Claims 10 and 11 require specific acid chlorides. Phosgene is an acid chloride of formula Cl-CO-Cl. Thus claims 10 and II are anticipated. (Office Action, page 4, para.2)

It is well-established law that the fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993) (reversed rejection because inherency was based on what would result due to optimization of conditions, not what was necessarily present in the prior art); *In re Oelrich*, 666 F.2d 578, 581-82, 212 USPQ 323, 326 (CCPA 1981). "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.' " *In re*

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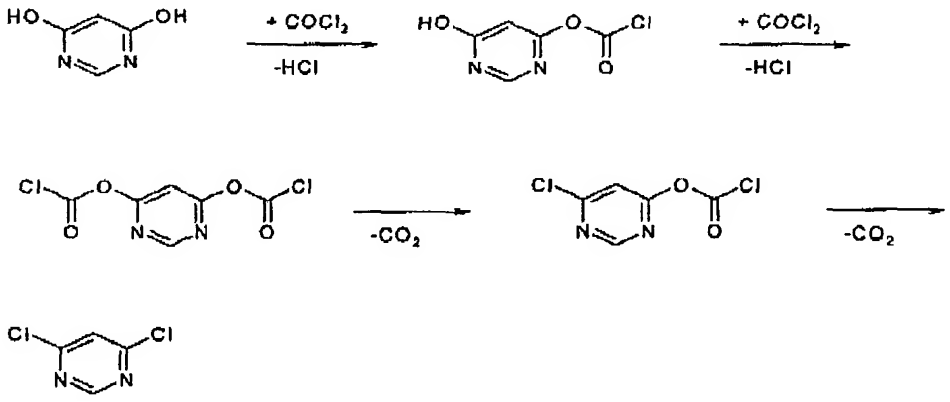
Robertson, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (citations omitted).

It is also well-established law that "[i]n relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original)

Claim 11 is related to a process for preparing 4,6-dichloropyrimidine comprising reacting 4-chloro-6-hydroxypyrimidine with an acid chloride.

The Office Action does not make clear that the missing descriptive matter is necessarily present in Bowen et al. There are many alternative possibilities for the reaction of Bowden et al, and it is not inherent that Applicants' 4-chloro-6-hydroxypyrimidine starting material is a necessary intermediate in the process taught or suggested in the prior art.

A possibility of simultaneous chlorination is merely an example, and there are other possible alternatives such as via intermediate carbonate derivatives. One possible mechanism of such a path of the Bowden reaction is given in the following:



According to this reaction scheme first the 4,6-dihydroxy-pyrimidin is attacked by one phosgene forming a mono-hydroxy mono-carbonate ester via HCl elimination. The

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latter is attacked by a second phosgene forming a di-carbonate ester, which is stepwise loosing carbon dioxide. According to this reaction scheme the second hydroxy group can be attacked before the first chloro group has been formed. This reaction scheme shows that 4-chloro-6-hydroxy-pyrimidin must be present as an intermediate, not . 4-chloro-6-hydroxypyrimidine. Consequently, the missing descriptive matter is not necessarily present in Bowden et al. In Bowden et al that a certain result or characteristic may occur or be present in the prior art, is not sufficient to establish the inherency of that result or characteristic. Therefore, the Office Action has not established inherency by indicating that a certain thing **may** result and that the certain thing is not necessarily present in Bowden et al. According, Bowden et al does not teach or suggest Applicants' invention. Reconsideration is requested.

Regarding Claim 13, Claim 13 has been amended to include "originating from the cleavage of 4-chloro-6-methoxy-pyrimidine." Support for the amendment may be found in the Specification as filed on page 2, lines 18-20. Bowen et al does not teach or suggest Applicants' invention of Claim 13. Reconsideration is requested.

Regarding Claims 11-12 and 14-18, Claims 11-12 and 14-18 depend from Claim 10, which as discussed is believed to be allowable, thus Claims 11-12 and 14-18 are also believed to be allowable.

In view of the above amendments, Applicants submit that the claims are in condition for allowance and the Examiner would be justified in allowing them.

Respectfully submitted,

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